

malnutrition were observed in 48% of the subjects. Malnutrition was present in 64% (21/33) of the overweight patients and in 91% (10/11) of the obese patients. Transplantation vintage was directly associated with fat mass and inversely associated with LBM. Malnourished patients (SGA) had a longer transplantation vintage. Adiponectin levels were significantly lower in transplanted patients as compared to controls. In multivariate analysis, leptin was an independent predictor of serum creatinine level and of eGFR. The prevalence of concurrent signs of overweight/obesity and malnutrition in the kidney transplant recipients is high

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PARTIALLY HYDROLYZED GUAR GUM INTAKE AMELIORATES CONSTIPATION, IMPROVES NUTRITIONAL STATUS AND REDUCES INDOXYLSULFURIC ACID IN DIALYSIS PATIENTS.

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Dialysis patients often develop constipation and changes in intestinal bacterial flora. Indoxylsulfuric acid (IS) levels rise as glomerular filtration decreases, and patients with renal failure have high IS. Elevated IS is also caused by increased indole due to altered intestinal flora (Takayama et al, Am J Kidney Dis. 2003). We investigated whether administering partially hydrolyzed guar gum (PHGG) (Sunfiber: a product of Taiyokagaku Co., Ltd., Japan) ameliorates constipation and improves nutritional status in dialysis patients, while decreasing IS levels. Thirty-five patients on maintenance dialysis (mean age, 71 ± 9; male/female= 22/13) ingested PHGG (10 g/day) for 6 weeks. Defecation was scored before and after PHGG intake using a modified Constipation Assessment Scale-Long Term (Japanese version). Nutritional status was rated according to the Geriatric Nutritional Risk Index (GNRI) before and after PHGG intake. IS was measured in 8 patients taking PHGG orally for 24 weeks, for comparison with those in 8 patients not on PHGG. Constipation scores decreased from 7.9 to 5.0 ($p < .01$) and GNRI increased from 95.0 ± 5.0 to 95.9 ± 5.7 ($p < .05$), reflecting amelioration of constipation and improved nutritional status. The ratio of IS after to that before PHGG intake was calculated to analyze the magnitude of IS change. The ratio in patients not on PHGG was 1.2 ± 0.3, i.e. IS rose, while that in patients taking PHGG was significantly reduced (0.8 ± 0.3, $p < .05$). Our results indicate PHGG consumption to ameliorate constipation and improve nutritional status, and that continued intake reduces IS, in dialysis patients.

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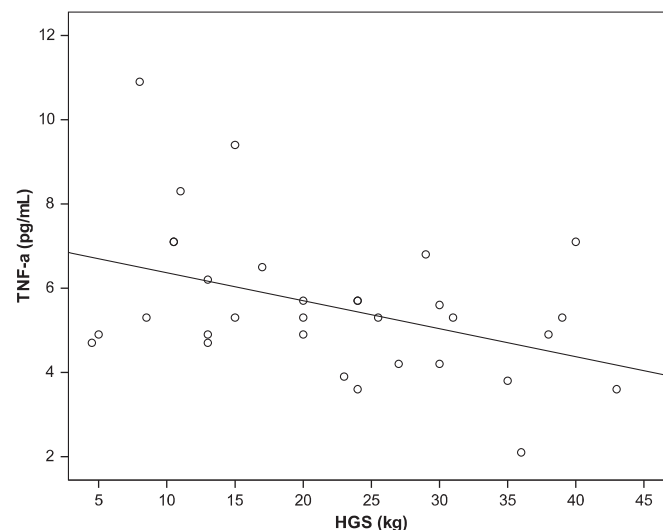
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ASSOCIATION BETWEEN HANDGRIP STRENGTH AND INFLAMMATION IN HEMODIALYSIS PATIENTS

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The inflammation is a common feature in HD patients and may contribute to muscle wasting. Handgrip strength (HGS) has been recognized as a useful tool in assessing muscle function in hemodialysis (HD) patients. The aim of this study was to evaluate the association between inflammation and muscle function in HD patients. Twenty-three HD patients (19 men, 54.3 ± 12.4 years of age, BMI, 24.5 ± 4.6kg/m²) were studied. HGS was measured 3x with a mechanical dynamometer after the HD sessions. HGS values less than the 10th percentile of an age-, gender-

and regional specific reference were considered as muscle function loss. Tumoral necrosis factor- α (TNF- α) and interleukin-6 (IL-6) levels were determined by a multiplex assay kit through the device Luminex method. C-reactive protein (CRP) was measured with the immunoturbidimetric method. HGS values were significantly greater in males (28.8 ± 9.7 kg) than females (13.9 ± 6.5kg) ($p < 0.0001$) and, 57.6% of the HD patients presented muscle function loss. TNF- α , IL-6 and CRP levels were 5.6 ± 1.7pg/mL, 3.5 (1.75) pg/mL and 0.17 (0.50) mg/dL, respectively. According to the CRP levels, 42.4% of the HD patients presented inflammation (CRP > 0.3mg/dL). CRP and IL-6 were not correlated with HGS, but TNF- α were inversely correlated with HGS ($r = -0.42$; $p = 0.01$). These data suggest that inflammation can play an important role on muscle function in HD patients.



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URIC ACID LEVELS CORRELATES WITH INFLAMMATORY MARKERS AND ADHESION MOLECULES IN HEMODIALYSIS PATIENTS

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Elevated serum uric acid has been associated to a variety of cardiovascular disease states and with systemic inflammation. The aim of this study was to analyze the association between uric acid levels and inflammatory markers in hemodialysis (HD) patients. This cross-sectional study included 50 HD patients (62% men, 54.3 ± 12.6 yrs, BMI 24.4 ± 4 Kg/m²) and 21 healthy individuals (45% men, 50.7 ± 15.7 yrs, BMI 25.5 ± 4.0 Kg/m²). Uric acid was measured using uricase-PAP method, inflammatory (TNF- α , IL-6 and CRP) and atherosclerosis markers (ICAM-1, VCAM-1, MCP-1 and PAI-1) were measured by a multiplexed particle-based flow cytometric assay. There was a positive correlation between serum uric acid and inflammatory markers, IL-6 ($r=0.30$, $p=0.01$), CRP ($r=0.37$, $p=0.003$), TNF- α ($r=0.40$, $p=0.001$) and adhesion molecules levels, ICAM-1 ($r=0.53$, $p=0.0001$), and VCAM-1 ($r=0.45$, $p=0.0001$)

Parameters	HD Patients	Healthy individuals
CRP (mg/mL)	0.32 ± 0.30 [*]	0.11 ± 0.12
TNF- α (pg/mL)	5.5 ± 2.1 [*]	2.4 ± 1.1
IL-6 (pg/mL)	4.1 ± 1.6 [*]	2.7 ± 0.4
PAI-1 (ng/mL)	7.0 ± 2.7	6.2 ± 2.1
MCP-1 (pg/ml)	47.6 ± 24.2	37.3 ± 19.0
VCAM-1 (ng/mL)	48.5 ± 8.5 [*]	23.8 ± 5.5
ICAM-1 (ng/mL)	20.5 ± 15.9 [*]	7.2 ± 1.2

^{*} $p < 0.05$